

Introduction to the Sample O & M Manual

This product is supplied as a guide for the generation of a comparable manual customized for your own system. It is intended to be indicative of the level of detail required by ordinance for this document. The material specifically supplied herein does not correspond to any actual facility, nor does the equipment listed match any real product in manufacturer, dimensions, or product number.

This document cannot be copied as is and submitted to meet requirement.

A document specific to your facility must be produced and submitted by the permittee. This sample may be used as a template for this document. Another form may be used, provided that it gives equal or greater guidance in the operation and maintenance of the facility.

In some cases, this document provides multiple examples. In creating the specific document, the preparer would select the correct choice and include such detailed information as the sample indicates.

The reporting procedures section has been written to meet the requirements of the present ordinance and may be used as provided. The pump station elapsed time meter form and the PSO permit annual renewal form are DERM documents and shall be used as supplied. These forms may be reproduced for use as necessary.

The materials relating to the collection system have been written to meet the ordinance requirements for this subject for private facilities. This material is newly required by Miami-Dade County Ordinance 96-166 and is more fully described in other documents in this package.

Sample

Operations and Maintenance Manual

Pump Station PSO-00108

June 10, 1998

Prepared By:

Sample

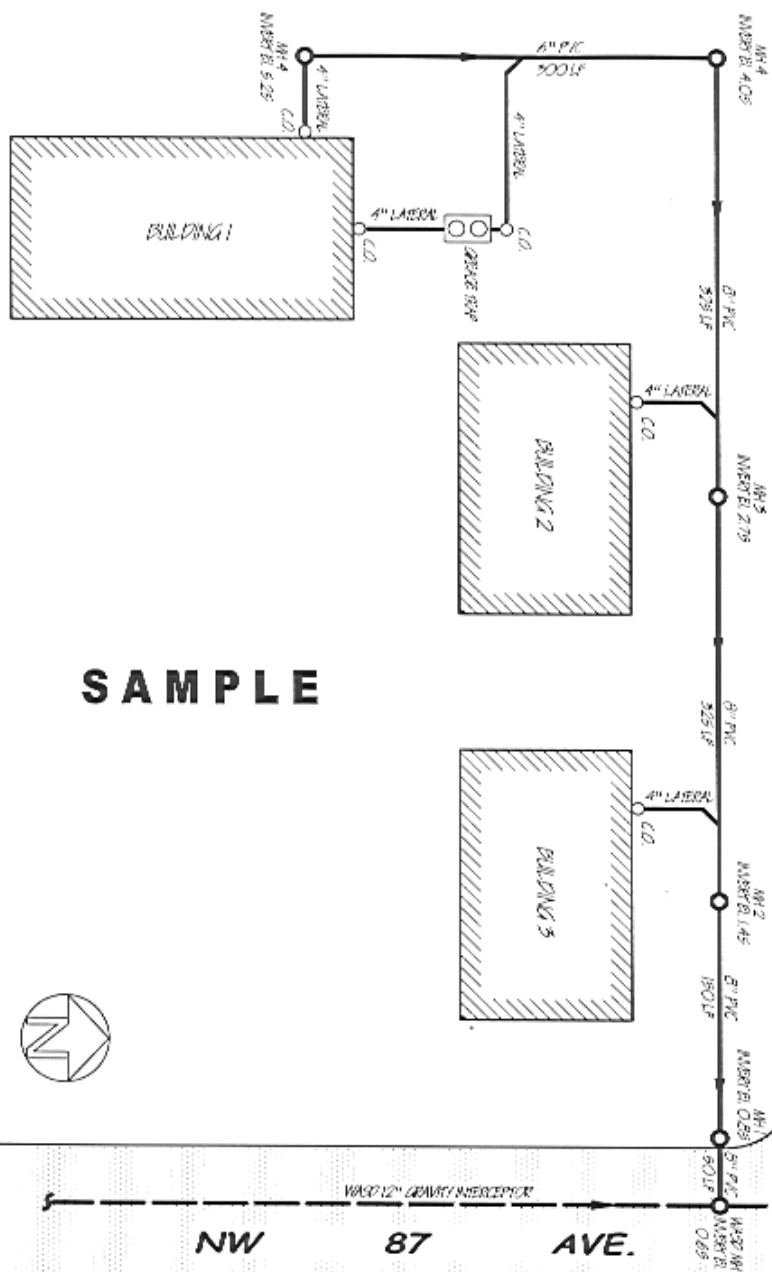
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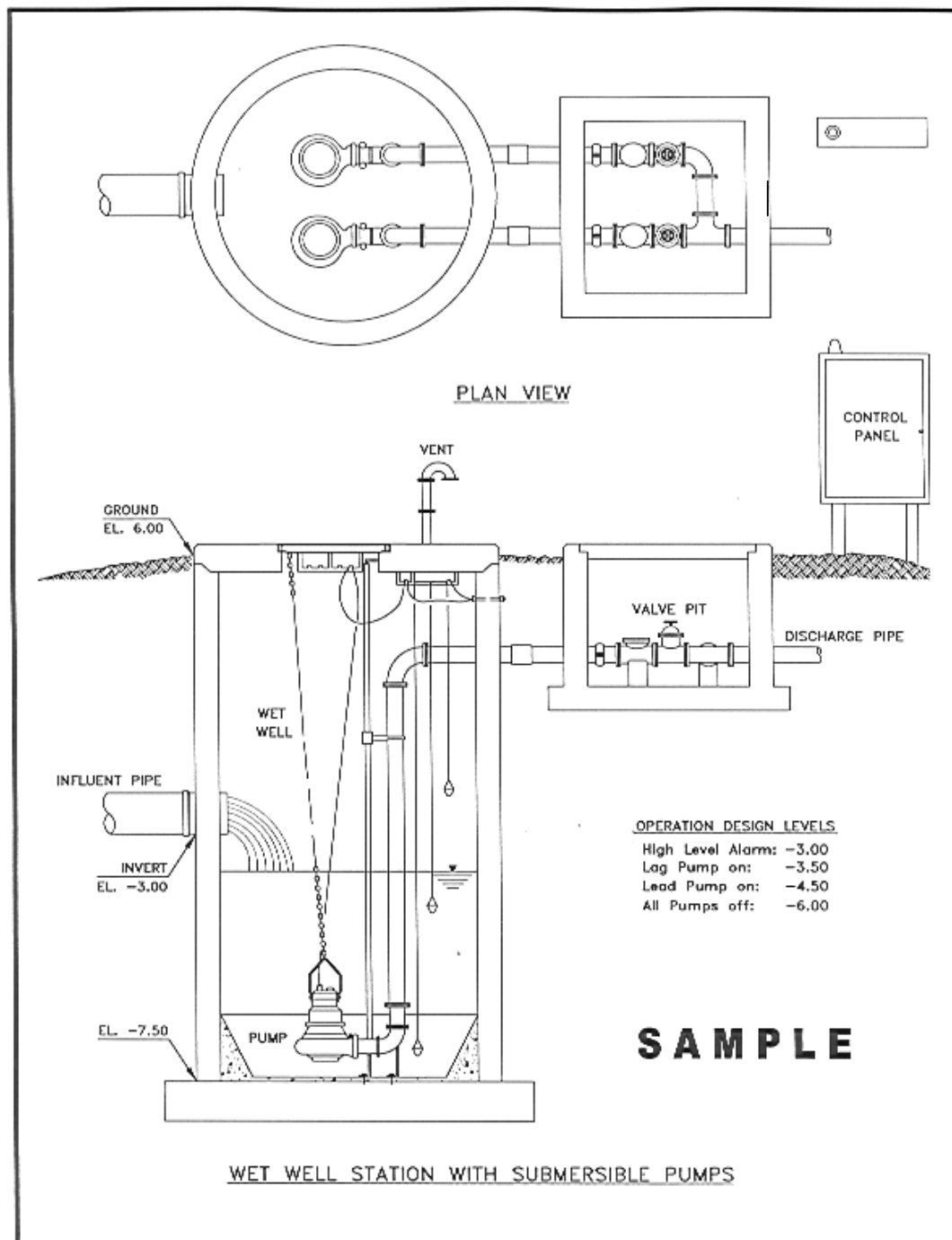


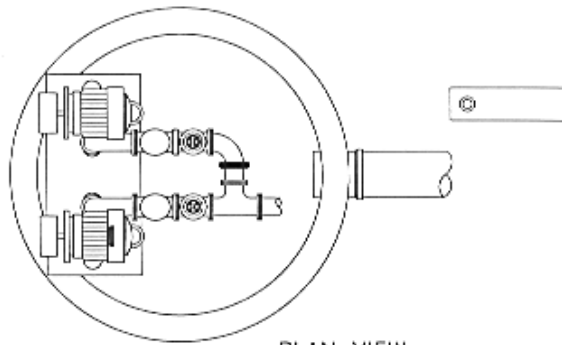
PRIVATE SANITARY SEWER COLLECTION SYSTEM PLAN (WITHOUT PUMP STATION)

NW 10 ST.

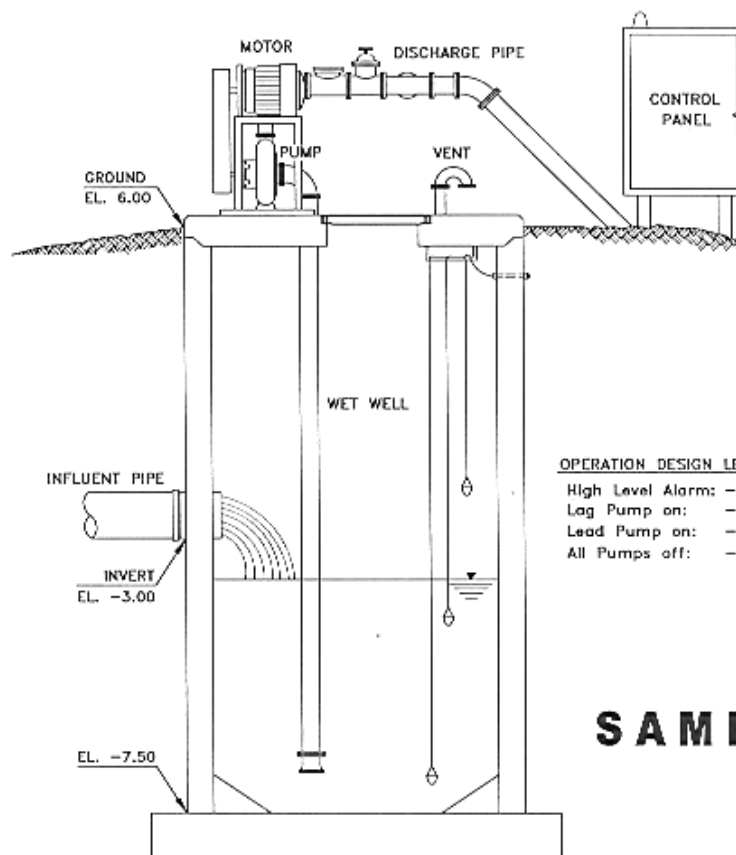


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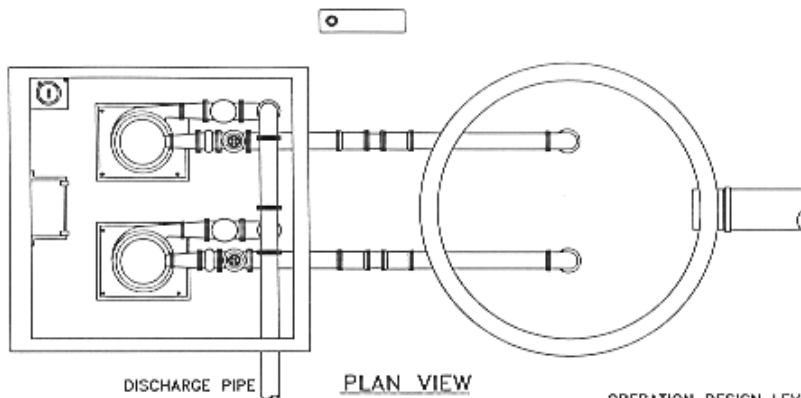


PLAN VIEW



SAMPLE

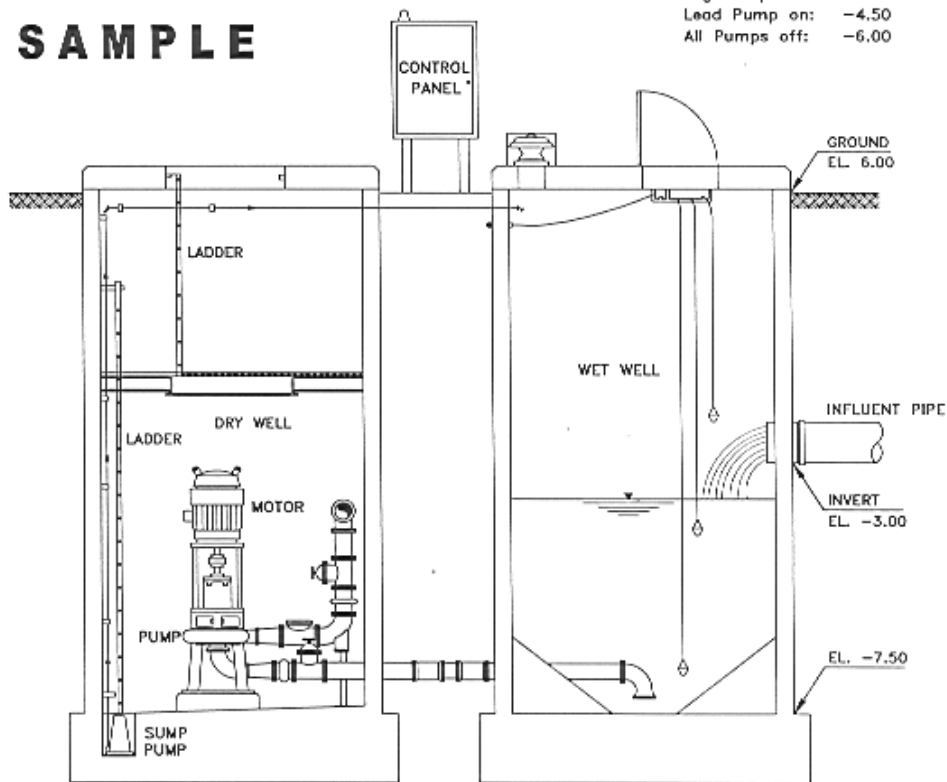
WET WELL STATION WITH PUMPS ABOVE GROUND



OPERATION DESIGN LEVELS

High Level Alarm: -3.00
 Lag Pump on: -3.50
 Lead Pump on: -4.50
 All Pumps off: -6.00

SAMPLE

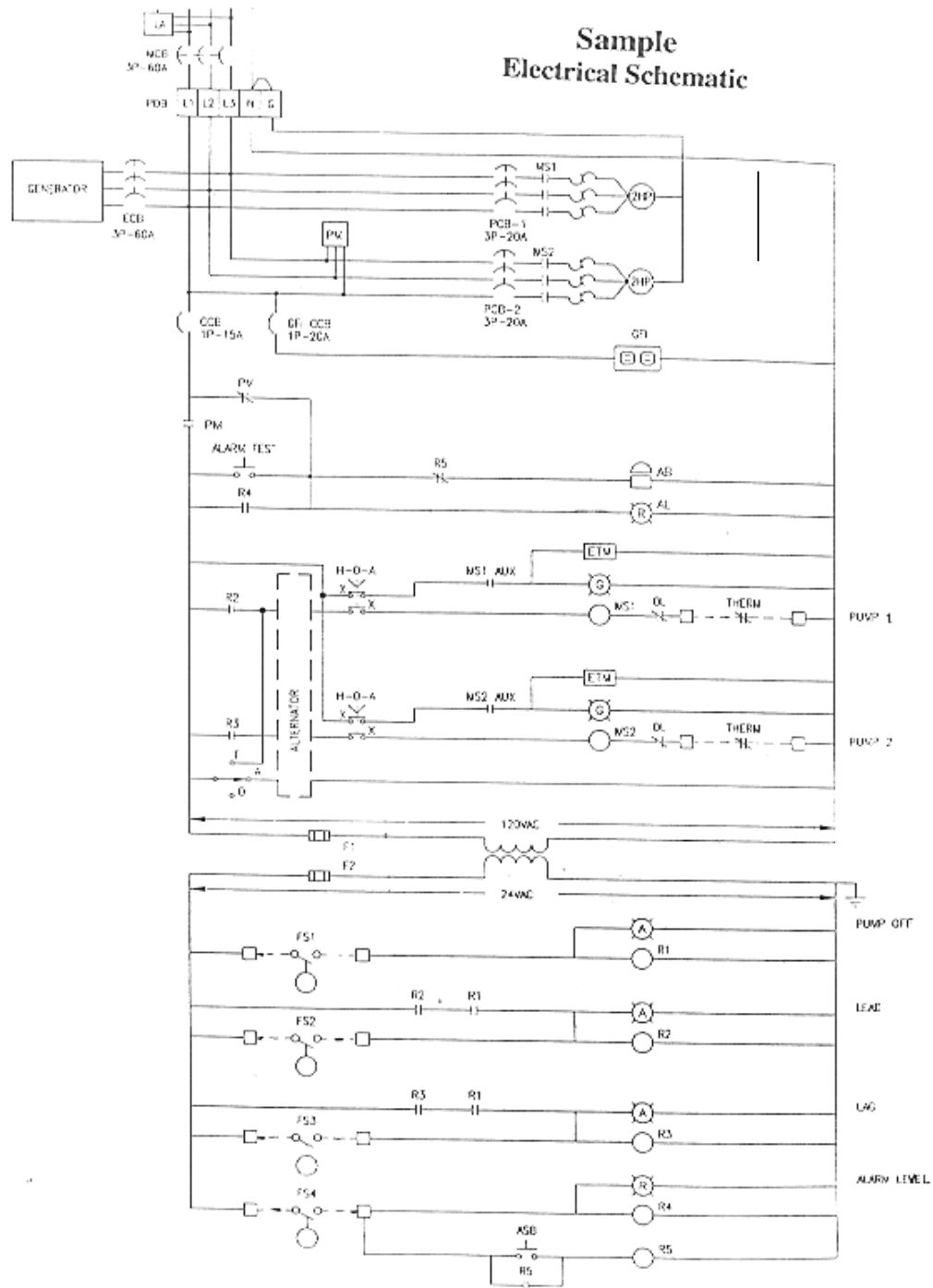


WET WELL / DRY WELL PUMP STATION

Pump Station Equipment List & Specifications

Pumps:	(2) Acme model A1A/s 1800 rpm 7 ¾ inch impeller Rated 65 gpm @ 65 foot head 5 hp Serial numbers 1000501 and 1000502
Motors:	(2) Acme model B1A/2 1750 rpm 5 hp 240 volts 23 Amps F.L.A. Serial numbers 2000503 and 2000504
Control Panel:	Acme Model C1A/2 control panel with audio & Visual Alarms 100 Amp rating Serial number 50055
Float Switches:	Acme model D2A/2 120 volt 5 amp rating
Plug Valves:	Acme model E2A/2-4" plug valves
Check Vales:	Acme model F2A/2-4" spring check valves
Air Compressor:	Acme model G2A/2, 120 volt, ½ Hp.
Control Panel:	Acme model H2A/2, two-pump control, 120/208v, 3 phase.
ET Meters:	Acme model J2A/2, non-resettable elapsed running time meter

Sample Electrical Schematic



Sample

Preventive Maintenance Schedule

Equipment	Activity	Frequency
Pump motor	Lubricate bearings	s/a
	Check running amperes	a
	Measure insulation resistance	b/a
Drive Belt	Check	m
Drive Belt	Replace	a
Pump	Check bearings	m
	Lubricate bearings	a
	Check packing	m
	Replace packing	b/a
	Check outflow pressure	a
Gate Valve	Lubricate	a/n
	Exercise	a
Check Valve	Check	s/a
Control Panel	Check for tripped breakers	m
	Check for corrosion	s/a
	Tighten connections	b/a
Bubbler system	Replace pump diaphragm or cylinder	a
	Replaced flexible air tubing	b/a
Floats	Clean	a/n
Locks	Lubricate	s/a
Hatch cover	Check	s/a
Electrical	Check indicator and alarm lamps	s/a
RPZ Check Valve	Test for proper operation	a
Property	Check, clean and maintain as req.	m

Schedule key: b/a – biannually; a – annually; s/a – semi-annually;
m – monthly; a/n – as needed

Sample

Corrective Maintenance Practices

Pumps

Pumps shall be maintained in accordance with the directions of the pump manufacturer. New seals shall be installed whenever the pump is opened for work. Clearances shall be within designated ranges.

Pump motors

Motors shall be maintained in accordance with the directions of the manufacturer. Bearings shall be replaced when play exceeds manufacturers rated value or when pump is rewound. Bearings shall be installed with approved tools.

Control Panel

All work in the control panel shall be performed in accordance with the National Electrical Code, NFPA 70. Failed components shall be replaced with equal components carrying UL approval, when such components are of a type so reviewed.

Float Switches

Float switches, which fail in service, shall be replaced with new switches.

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Reporting Procedures

Elapsed running time meters; Meters shall be read monthly and recorded on DERM Form PSO-04. A copy of the current form will be included with the permit renewal form.

Changes in the length of the collection system shall be reported on the annual permit renewal form.

All scheduled and emergency maintenance shall be recorded in the station log book. The entries shall include, at a minimum, the item serviced, the work done, and the date of the work. If the maintenance requires more than one day, the starting and finishing dates shall be recorded.

The logbook shall be maintained at the site of the facility served, in a location protected from the weather.

If there is a service contract for the permitted facility, the name, phone number, and contact person of the contractor shall be reported on the permit renewal form.

All overflows shall be reported to DERM within 24 hours of the event. The report shall include the time and duration of the event, the actions taken to correct the overflow, and the estimated volume of the overflow. The initial reporting of the event may be by fax or verbal communication. If the later, a written confirmation shall be submitted within 72 hours.

Significant equipment failures shall be reported to DERM within 48 hours of the event. Notification shall be by verbal communication followed by written notification or by fax. Reports shall be made for failures of the pumps, pump motors, and level control systems.

Sample

Collection System Inspection

Annual Inspection:

Manholes: All system manholes shall be opened and inspected for proper condition. Normal condition shall be taken to mean having a normal flow and not surcharged above the top of the outflow pipe.

Cleanouts: All cleanouts shall be checked to confirm that they are properly capped to prevent inflow.

Ten Year Inspection Cycle:

A complete inspection of the entire collection system shall be conducted every ten years. The system shall be evaluated for infiltration/inflow according to the provisions and requirements set forth in the EPA Sewer System Infrastructure Analysis and Rehabilitation Handbook. The survey shall include a measurement of minimum system flow. The first such survey shall be turned in to DERM by November 12, 2002, and once every ten years after that date. Inspection work done on parts of the system after November 12, 1992, may be considered as current for the first survey.

Problems discovered by the survey shall be corrected within 30 days.

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Collection System Maintenance

Cleanouts:

Broken or damaged cleanouts shall be replaced or repaired when damage is detected. Cleanouts and caps in traffic areas shall be of metallic construction.

Manholes:

Surcharged manholes shall be corrected when detected. Surcharges caused by surcharges in the public utility shall be reported immediately to the public utility and to DERM. Surcharges created within the facility shall be cleared by jetting the downstream piping as required. Incorrect slopes shall be re-laid to the correct slope.

Manholes without flow shall be flow tested from upstream to confirm flow capacity, unless the manhole is at the end of the line.

Pipes:

Leaking pipes shall be repaired by the best appropriate means. Intruding roots shall be removed where located, and the opening grouted. Broken sections of pipe shall be replaced when detected.